

June 22, 2005

To: Interested Host Sites

Re: St. Louis Regional Recycling Partnership for Electronics Recovery

The St. Louis Regional Recycling Partnership for Electronics Recovery is pleased to invite you to join a regional network for residential consumer electronics recovery. The purpose of the network is to provide a regional system for residential generators of electronic waste to have outlets to take those materials for proper handling and recycling. The Partnership would like to invite you to join this growing network.

Attached please find program materials and an application form and self-audit form. Please review these materials and return the application forms at your earliest convenience, but no later than July 22, 2005. Education and outreach plans are currently being developed, and it will be beneficial to be part of the network when the initial publicity efforts get underway.

As an additional incentive, initial participants will have an opportunity to receive limited financial assistance through some one-time District Grant funds for improvements that may be necessary to facilitate participation in the regional network for residential electronics recovery. This will be a one-time opportunity and provides a great incentive to join the network during the initial registration period.

Again, the St. Louis Regional Recycling Partnership for Electronics Recovery wishes to invite you to join the residential consumer electronics recycling network. Your participation will play an important role in providing cost-effective and sustainable recycling for electronic scrap generated by residences throughout the St. Louis region.

Sincerely,

A handwritten signature in black ink, appearing to read "David Berger". The signature is fluid and cursive, with the first name "David" being more prominent than the last name "Berger".

David Berger, Executive Director  
St. Louis-Jefferson Solid Waste Management District

(on behalf of the St. Louis Regional Recycling Partnership for Electronics Recovery)

# St. Louis Regional Recycling Partnership for Electronics Recovery

## Collection Site Registration Application Package 2005/2006

### **Description of the Regional System:**

The City of St. Louis and Jefferson, St. Charles and St. Louis Counties established the St. Louis Regional Recycling Partnership for Electronics Recovery to expand collection, reuse, and recycling of consumer electronics in the region. Saint Louis County Department of Health, serving as the regional program coordinator, received a grant from the St. Louis-Jefferson Solid Waste Management District (the District) to coordinate development of this regional system. A regional task force with representatives from local businesses, non-profit organizations, and government agencies designed the long-term, sustainable approach for a regional network of sites where residents can drop-off unwanted or obsolete electronic items for reuse and recycling year-round.

The regional system will promote a PRODUCT STEWARDSHIP approach, where the cost and responsibility for environmentally safe collection, reuse, and recycling, is shared among those who participate in the life cycle of the product. By establishing and promoting permanent collection sites that charge user fees to cover program costs, this regional system will enhance program sustainability. The goal of the regional system is to drive consumer demand for proper management of electronics by offering:

- A growing and comprehensive local infrastructure of convenient and environmentally sound reuse and recycling outlets for consumer electronics,
- Public education and outreach to raise the general public's awareness of the environmental, economic, and social benefits of reusing and recycling used electronics and where to return end-of-life electronics for reuse and recycling.

To encourage participation in the regional system, collection sites that join the system in the initial start-up phase are eligible to obtain limited funding for site improvements and direct costs to handle the additional capacity and providing collection services to residential generators in the region. Funding for these start-up improvements may be made available through the St. Louis-Jefferson Solid Waste Management District (District) and would comply with District requirements. Registered collection sites will be required to commit to minimum collection program standards and requirements outlined in this application package.

To promote the program, an on-going education and outreach program will be implemented to include:

- A list of all registered collection sites, accepted materials and fees;
- Primary environmental and public health issues associated with properly managing used electronics;
- Other available management options (manufacturer take-back and recycling programs).

The purpose of the educational materials and outreach activities is to inform residents about the regional recovery system and to increase residential demand for proper management of used electronics. Outreach activities may include:

- Newspaper advertising;
- Press releases;
- Articles in community newsletters;
- Cable television and video production;

- Mailings to residents, neighborhood associations and community groups, municipalities, electronics retailers and user groups, solid waste industry, etc.;
- Website, e-mail and hotline postings; and,
- Program brochure and flyer distribution.

## **Regional Partnership Commitments**

### ***Registered Collection Sites COMMITMENT***

Registered collection sites will be committed to offering convenient quality service to their customers. Registered collection sites will ensure that all accepted materials collected are properly reused, recycled, or disposed of in accordance with all applicable laws and regulations. Registered collection sites are responsible for arranging proper management of materials generated by their participation in the program. Registered collection sites can charge customers a fee for the service. Registered collection sites will share information about customer response, type and amount of materials recovered, downstream destinations for hazardous materials, any changes in handling or processing since registration, and general improvement ideas with the regional co-sponsor on a semi-annual basis.

### ***Co-sponsors COMMITMENT***

The regional co-sponsors (City of St. Louis, and Jefferson, St. Charles and St. Louis Counties) are committed to implement the education and outreach program to raise community awareness and generate residential participation. The regional co-sponsors will work with the local collection sites to promote the program and resolve issues affecting on-going participation in the regional system. Program information dissemination, media and community outreach, and technical assistance are a significant part of the regional co-sponsors' support for the collection system.

## **Guidelines for Registering to be a Collection Site:**

The purpose of the registration process is to identify and promote legitimate reuse and recycling outlets for consumer electronics. The registration process also promotes acceptable standards for recycling consumer electronics by participating collection sites (see Operational Standards and Requirements—Attachment A). The registration process includes completing the Collection Site Agreement Form, complying with program requirements, and successfully completing a facility self-assessment and site visit by program representatives. Annual inspections will be performed to ensure on-going compliance with the program requirements, to maintain presence on the list of registered sites, and to be included in education and outreach activities.

### ***Who Can Join?***

Any organization that accepts electronic equipment for reuse or recycling can participate in the regional program. Eligible organizations can include, but are not limited to the following:

- Electronics retailers
- Computer resellers
- Electronics recyclers
- Charitable Organizations
- Local governments
- Recycling centers and material recovery facilities (MRFs)
- Landfills and transfer stations

The following is a general description of the implementation of the regional system:

***Phase I – Initial Identification and Registration of Collection Sites:***

1. Interested collection sites need to complete the Collection Site Application Form and Self-Audit Facility Survey and return to the address indicated on the Collection Site Application Form.
2. As part of the review process, a facility site visit will be scheduled with the co-sponsors to inspect the Applicant's collection site(s).
3. Regional Program Coordinator will issue a Notice of Acceptance and designates a facility as a Registered Collection Site based on:
  - Agreement to adhere to Operational Standards (Attachment A),
  - Successful completion of a facility self-assessment and site visit.
  - Agreement to be included in the education and outreach program.

***Phase II – Collection Site Needs Assessment and Financial Assistance Opportunities (Initial Participants Only):***

As an incentive for collection sites to be listed on the registry and participate in the regional program, a one-time opportunity for financial assistance is available through the St. Louis-Jefferson Solid Waste Management District (District). In order to secure assistance, the following process will be utilized:

1. Regional co-sponsors will conduct a collection site needs assessment for the initial sites requesting to be included within their jurisdictions, and compare to the needs of the entire regional system and grant funding availability guidelines.
2. Regional co-sponsors will recommend collection site funding allocation.
3. Registered Collection Sites receiving assistance will be required to enter into an agreement with the District and adhere to all District requirements.

***Phase III – Regional Program Implementation and Collaboration:***

1. Registered Collection Sites will supply a semi-annual report on program results and provide updates to the appropriate regional program co-sponsor.
2. Regional co-sponsors implement on-going Education and Outreach Program.
3. Regional co-sponsors conduct Annual Inspection for registration renewal.

**Application Package for Collection Site Registration:**

Application and Registration Form and Self-Audit Facility Survey  
Operational Standards and Requirements – Attachment A  
List of Acceptable Electronics – Attachment B  
US EPA Material Management Guidelines – Attachment C

# St. Louis Regional Recycling Partnership for Electronics Recovery

## Application and Registration Form 2005/2006

**Please complete this form, sign and return by July 22, 2005 to:**

David Berger, Executive Director, St. Louis-Jefferson Solid Waste Management District, 7525 Sussex Avenue, Maplewood, MO 63143.

**Questions?** Contact Laura Yates, Project Coordinator at 314-615-4035 or [lyates@stlouisco.com](mailto:lyates@stlouisco.com)

**Company Name:** \_\_\_\_\_

**Authorized Official Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_ **Website:** \_\_\_\_\_

**Company Description:** Which of the following best describes your organization? (Check one)

☐ Non-profit/Charity ☐ Private Business ☐ Municipal/local government

**Description of Electronics Recycling Service:** (Check all that apply)

What type of operation best describes how you plan on handling old electronics (check all that apply):

☐ Consolidate and ship to another handler ☐ Test and repair for resale  
☐ Disassemble (demanufacture) for recycling ☐ Process/smelt scrap into raw materials  
☐ Export ☐ Other: \_\_\_\_\_

**Contact Information For Education & Outreach Program:**

Contact Information to be listed in program materials and website:	Contact Name:	
	Phone:	
	Fax:	
	e-mail address:	
Collection Site Information to be listed in the program materials and website:	Street Address:	
	City, State, Zip Code:	
	Website Address:	
	Days and Hours:	

**Description of Accepted Materials and Recycling Services:** (Attach additional pages, as needed.)

<b>Type of Equipment Accepted:</b>	<b>Type and Description:</b> (Quantities accepted, other limits, etc.)	<b>Recycling Fees:</b>
<b><i>Computer Monitors</i></b>		
Central Processing Units		
Laptops		
Printers		
Scanners		
Fax Machines		
Copiers		
TVs		
Batteries		
Cell Phones		
PDAs		
Other Electronics		

**COMMENTS:** (e.g., why your proposed collection site is a good candidate, other services, etc.)

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***SIGNATURES:***

We have read and agree to the Regional Consumer Electronics Recycling Program guidelines and agree to receive the consumer electronics indicated on this Form and ensure that they are reused, recycled, or disposed of in accordance with the operational standards. We have read and agree that an entity registered to be a collection site shall protect, indemnify, and hold harmless the St. Louis-Jefferson Solid Waste Management District and regional program co-sponsors, and their officers, directors, employees and agents from and against any and all liabilities, losses, suits, judgments, claims, demands and causes of action of any nature whatsoever in connection with the performance of this Application for Registration by the Applicant, its agents and employees.

**Approved for Applicant:**

<hr/>	<hr/>
Company/Organization Name	Date
<hr/>	<hr/>
Authorized Official (Print Name)	Authorized Official (Signature)

**Approved for Regional Program Co-sponsor:**

<hr/>	<hr/>
Agency Name	Date
<hr/>	<hr/>
Authorized Official (Print Name)	Authorized Official (Signature)

# St. Louis Regional Recycling Partnership for Electronics Recovery

## Host Site Self-Audit Form

2005/2006

Please complete this form, sign and return **by July 22, 2005** to:

David Berger, Executive Director, St. Louis-Jefferson Solid Waste Management District, 7525 Sussex Avenue, Maplewood, MO 63143.

**Questions?** Contact Laura Yates, Project Coordinator at 314-615-4035 or [lyates@stlouisco.com](mailto:lyates@stlouisco.com)

Company Name: \_\_\_\_\_ FEIN#: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Website: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Respondent to this query: \_\_\_\_\_

### **A. General Company Information:**

#### **1. What kind of company are you?**

\_\_\_\_ Broker      \_\_\_\_ Refurbisher/Reseller      \_\_\_\_ Demanufacturer

#### **2. General description of your business**

- a. Number of employees \_\_\_\_\_
- b. Years in the e-scrap business and ownership history \_\_\_\_\_
- c. Facility site information and plant size:

d. Summary of operations and services offered:

#### **3. Do you process equipment and components by demanufacturing or shredding?**

\_\_\_\_ Yes      \_\_\_\_ No

#### **1. If not, are components \_\_\_\_ (outsourced) or \_\_\_\_ (exported)?**

#### **2. What other services do you provide? Fee**

\_\_\_\_ Palletizing and pickup from customer      \_\_\_\_\_  
\_\_\_\_ **Hard drive erasure/secure data destruction**      \_\_\_\_\_  
\_\_\_\_ Product tracking through final state of materials      \_\_\_\_\_  
\_\_\_\_ Other \_\_\_\_\_      \_\_\_\_\_

6. Will you provide references, including the most recent clients for whom you have provided service?

\_\_\_\_ Yes      \_\_\_\_ No

7. What types of e-scrap do you accept? If there is a fee for the collection, please indicate the amount next to each item.

**Computers and Peripherals**      **Fee**

\_\_\_\_ Monitors      \_\_\_\_\_  
\_\_\_\_ Desktop CPU      \_\_\_\_\_  
\_\_\_\_ LCD displays-laptops      \_\_\_\_\_  
\_\_\_\_ Notebook Computers      \_\_\_\_\_  
\_\_\_\_ CD, CDRW drives      \_\_\_\_\_  
\_\_\_\_ Hard Drives      \_\_\_\_\_  
\_\_\_\_ Zip Drives      \_\_\_\_\_  
\_\_\_\_ Scanners      \_\_\_\_\_  
\_\_\_\_ DVD drives      \_\_\_\_\_  
\_\_\_\_ Floppy drives      \_\_\_\_\_  
\_\_\_\_ Printers      \_\_\_\_\_  
\_\_\_\_ Speakers      \_\_\_\_\_  
\_\_\_\_ Other \_\_\_\_\_      \_\_\_\_\_

**Communication Services**      **Fee**

\_\_\_\_ Cell phones      \_\_\_\_\_  
\_\_\_\_ Corded phones      \_\_\_\_\_  
\_\_\_\_ Cordless phones      \_\_\_\_\_  
\_\_\_\_ Answering machines      \_\_\_\_\_  
\_\_\_\_ Pagers      \_\_\_\_\_  
Other \_\_\_\_\_

**Miscellaneous**      **Fee**

\_\_\_\_ Packet PCs      \_\_\_\_\_  
\_\_\_\_ Data Cartridges      \_\_\_\_\_  
\_\_\_\_ Battery back-ups/ups      \_\_\_\_\_  
\_\_\_\_ PC and digital cameras      \_\_\_\_\_  
\_\_\_\_ Servers      \_\_\_\_\_  
\_\_\_\_ Routers      \_\_\_\_\_

**Other Office Equipment**      **Fee**

\_\_\_\_ Fax machines      \_\_\_\_\_  
\_\_\_\_ Multifunction machines      \_\_\_\_\_  
\_\_\_\_ Adding machines      \_\_\_\_\_  
\_\_\_\_ Copiers      \_\_\_\_\_  
\_\_\_\_ Other \_\_\_\_\_      \_\_\_\_\_

**B. Compliance with federal, state and local environmental laws to safeguard occupational and environmental health and safety:**

1. Does your company have an EPA ID number?      \_\_\_\_ Yes      \_\_\_\_ No

If yes, your number is \_\_\_\_\_

2. Does your company have a State ID number?      \_\_\_\_ Yes      \_\_\_\_ No

If yes, your number is \_\_\_\_\_

3. Can you provide information on your company's compliance history?      \_\_\_\_ Yes      \_\_\_\_ No

- ☐ Summary of federal or state environmental agency inquiries and enforcement actions during the past three years (Please attach)
- ☐ Reports to government agencies from the past three years (Please attach)



4. Can you provide evidence of appropriate permits? \_\_\_\_\_Yes \_\_\_\_\_No

- ☐ Air permit
- ☐ Storm water permit
- ☐ Solid Waste permit
- ☐ Business permit
- ☐ Zoning permit
- ☐ Transportation/licensure
- ☐ Hazardous waste permit
- ☐ Resource Recovery permit
- ☐ Building permit
- ☐ Occupancy permit
- Other \_\_\_\_\_

**C. Documentation regarding end-use markets:**

1. Approximately what percentage, by weight, of all the equipment you receive do you send for disposal in landfills or for incineration? \_\_\_\_\_% \_\_\_\_\_Tons/year landfilled or incinerated.
2. Will you provide documentation to the program/regional co-sponsor about the handling and processing of collected materials, including the demanufacturing and disposition process and reuse/recycling end-markets? \_\_\_\_\_Yes \_\_\_\_\_No
3. Do you export or broker for export used equipment? \_\_\_\_\_Yes \_\_\_\_\_No
4. If yes, what countries are your primary markets for used equipment?  
\_\_\_\_\_
5. Will you provide documentation to the program/regional co-sponsor demonstrating that your organization does not export of materials (whole or broken) that are known to fail EPA's TCLP tests to Third World countries? \_\_\_\_\_Yes \_\_\_\_\_No
6. Can your downstream vendors document their procedures to our satisfaction (See Operational Standards)? \_\_\_\_\_Yes \_\_\_\_\_No

**D. Risk Management**

1. Do you have General Liability Insurance? \_\_\_\_\_Yes \_\_\_\_\_No  
*How much coverage?* \_\_\_\_\_
2. Do you have other types of insurance? \_\_\_\_\_Yes \_\_\_\_\_No  
If so, what type and how much coverage? \_\_\_\_\_

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**E. Disclosure verification:**

Do you attest that your responses to these questions are accurate and can be verified independently, or through documentation that you provide? \_\_\_\_\_Yes \_\_\_\_\_No

\_\_\_\_\_  
Company/Organization Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Authorized Official (Print Name)

\_\_\_\_\_  
Authorized Official (Signature)

## Operational Standards for Residential Consumer Electronics Collection Sites

2005/2006

The following constitutes the standards for registration and operations for organizations to serve as consumer electronics collection sites participating in the Regional System for collection, management, and disposition of consumer electronics.

### Procedural Requirements for Registration:

1. **Completion of Application for Registration:** Submit a completed application for registration and self-audit. As part of the review process for registering sites, the applicant must successfully pass a facility audit and site visit.
2. **Regional Program Partners:** Each entity registered to be a collection site will work with a regional program co-sponsor on an on-going basis for monitoring compliance with program operational standards and coordinating education and outreach activities. There are four regional program co-sponsors that correspond with the four jurisdictions of the St. Louis-Jefferson Solid Waste Management District:
 

<u>Jurisdiction</u>	<u>Organization</u>
a. City of Saint Louis	Refuse Division, Recycling Program Manager
b. Jefferson County	Solid Waste Management Program, Recycling Coordinator
c. St. Charles County	Environmental Services, Recycling Coordinator
d. St. Louis County	Waste Management Program, Project Coordinator
3. **Program Sustainability:** An entity registered to be a collection site may charge fees to cover costs to properly manage collected electronics. A market driven approach is expected, whereby reasonable fees are being charged in an amount that will support program sustainability. An entity registered to be a collection site shall collect RESIDENTIAL electronics during the term of the registration period by offering competitively priced service to residents in the region.
4. **Term of the Registration:** The collection site registration will be valid for one year from the date of notification. The registration will be renewed on an annual basis, pending compliance with reporting guidelines and successful completion of an annual site visit by the regional co-sponsors.
5. **Suspension of Registration:** An entity registered to be a collection site may have its registration suspended by a Regional Program Co-sponsor, or the St. Louis-Jefferson Solid Waste Management District (District) for failure to comply with any of the terms and conditions of the Registration. In such event, the Regional Program Co-sponsor or the District shall promptly notify the entity registered to be a collection site in writing of such suspension, with the reasons why and the actions required having the suspension removed. An entity registered to be a collection site will have its registration reinstated upon successful completion of the actions stated in the written notification of suspension.
6. **Termination:** Collection site registrations may be terminated by the Registered Collection Site, a Regional Program Co-sponsor, or the St. Louis-Jefferson Solid Waste Management District (District), in whole or in part, upon thirty (30) days advance written notice.

- a. **Termination for Cause:** An entity registered to be a collection site that has habitually failed to remain in compliance with any of the terms and conditions of the Registration or has committed a serious violation of any applicable laws or regulations that poses an imminent threat to public health or the environment. In such event, the Regional Program Co-sponsor or the District shall promptly notify the entity registered to be a collection site in writing of such determination, with the reasons therefore and the effective date of termination.
- b. **Termination for Convenience:** When the entity registered to be a collection site, and the Regional Program Co-sponsor or the District agree that continuation of the registration would not produce beneficial results to warrant with further involvement in the regional program.

7. **Re-application for Registration Process:** Any entity whose registration had been terminated shall be eligible to re-apply for registration after six months probation.

#### **Program Operation:**

1. **Accept Electronics from Residents:** An entity registered to be a collection site shall agree to offer a convenient electronics drop-off service to residential customers.
2. **Acceptable Electronics:** An entity registered to be a collection site may collect, at a minimum, high priority component items as indicated in the list of acceptable electronics provided in Attachment B. This list of acceptable electronics is subject to change as market conditions warrant. High priority items are hazardous components that may contain substances of concern as defined by the U.S. EPA (cathode ray tubes, circuit boards, and mercury containing devices, whole or in part, and any high priority consumer electronic product containing them). The minimum list of high priority items currently includes cellular phones, computer monitors, keyboards, printers, remote controls, smoke detectors, televisions, and videocassette recorders.
3. **Operating Hours:** An entity registered to be a collection site shall agree to schedule some regular evening and/or weekend hours to provide enhanced program convenience and accessibility for residents.
4. **Appropriate and adequate storage space:** An entity registered to be a collection site shall store all materials collected in this program to protect from physical damage and weather exposure so that the collected materials retain market value and prevent release of hazardous elements into the environment.
5. **Materials Management:** An entity registered to be a collection site will properly manage collected materials in accordance with the U.S. EPA guidelines, entitled "Plug-In to eCycling: Guidelines for Materials Management" (Attachment C). Collection sites that are directly contracting with recyclers and others for recycling and refurbishment services are responsible for verifying these entities comply with these guidelines:
  - Possess all appropriate federal, state, and local business, fire protection, building, safety, health, and environmental licenses, permits, certifications, workmen's compensation, general liability insurance, etc.
  - Maximize the reuse, refurbishment, and recycling of end-of-life electronics and components over landfill disposal and incineration. Utilize environmentally safe management practices for collection, processing, transit, and disposal of end-of-life electronic products. Process

and/or recycle at least 75% of materials received during a consecutive 12-month period, by the end of the same year.

- Erasing of the hard drive on computers with appropriate verifying certification shall be provided, upon request, to the customer.
- Ensure that exported electronic products are being sent for legitimate reuse, recycling, or refurbishment, and provide for special handling of hazardous components that may contain substances of concern as defined by the U.S. EPA (cathode ray tubes, circuit boards, and mercury containing devices, whole or in part, and any high priority consumer electronic product containing them). According to current U.S. rules regarding the export of hazardous wastes, all hazardous electronic materials that can be repaired for reuse or recycled shall be handled domestically or in countries belonging to the Organization for Economic Cooperation and Development (OECD).
- Ensure that all contractual arrangements with handlers and processors of collected materials, not managed directly by the entity registered to be a collection site, comply with all applicable federal, state, and local laws and regulations.

**6. Participation in Regional Public Education Program:** An entity registered to be a collection site agrees to participate in the regional public education program, whereby:

- Regional program co-sponsors shall publicly disseminate collection site information (accepted materials, fees, location address, hours of operation, etc.) to residents throughout the region in educational and promotional materials (websites, brochures, flyers, signage, media advertisements, etc.). This service is at no cost to the collection site.
- Registered collection sites agree to abide by regional public education program guidelines (logo usage, press releases, program messages, etc.) for its own marketing and promotion activities, to ensure a consistent image and program information dissemination to media contacts and customers.
- Registered collection sites are encouraged to offer customers information on other non-electronic recycling outlets (regional co-sponsors will provide collection sites with a comprehensive list of recycling outlets, informational websites, etc.).
- Registered collection sites are encouraged to provide customers an opportunity to evaluate the regional consumer electronics collection program by completing a written survey card (provided by regional co-sponsor) or e-mail feedback. The regional co-sponsors will tabulate the results of this voluntary customer participation survey to assess customer satisfaction, effectiveness of outreach activities, participation patterns, etc.

**Documentation of Disposition:**

**1. Market/End-user Documentation:** An entity registered to be a collection site agrees to maintain proper business records on collection, management, and processing of all collected materials to demonstrate compliance with all applicable local, state and federal regulations, including the U.S. EPA guidelines, entitled "Plug-In to eCycling: Guidelines for Materials Management" (Attachment C).

- If the collection site is a collection-only site, documentation (e.g., contracts, letters of commitment) regarding the handling and processing of collected materials.
- If the collection site is a processor site, documentation about demanufacturing and disposition process and reuse/recycling end-markets.
- All collection sites are encouraged to provide Certificates of Recycling to customers, upon request, that states materials were handled in compliance with all applicable rules and regulations.

**3. Training/Staff Experience:** An entity registered to be a collection site agrees to provide thorough staff training to ensure safe and efficient handling and processing of electronics, in

accordance with all applicable federal, state, and local regulations. Collection sites shall make available, upon request, documentation of training procedures and certificates of completion.

- 4. Semi-annual Reporting Requirements:** An entity registered to be a collection site agrees to submit to the regional co-sponsor the following program results on a semi-annual basis:
- Quantity of material accepted, by item,
  - Final disposition of materials, by item,
  - Problems encountered and solutions pursued,
  - Recommendations for program improvement,
  - Any changes in handling or processing since registration.

## List of Acceptable Electronics

2005/2006

*This list of acceptable electronics is subject to change as market conditions warrant.*

**Category A: High Priority Items** - Materials that exceed regulatory limits for certain heavy metals, according to a U.S. EPA-funded study by University of Florida. High priority items are hazardous components that may contain substances of concern as defined by the U.S. EPA (cathode ray tubes, circuit boards, and mercury containing devices, whole or in part, and any high priority consumer electronic product containing them).

- Computer Peripherals:
  - circuit boards
  - keyboards
  - printers
- Computer Monitors and Televisions:
  - cathode ray tube and flat panel
  - smaller than 18"
  - 18-32/36"
  - over 32/36"
  - TV/VCR combo (27" and smaller)
- Other Electronics:
  - Video cassette recorders (VCRs)
  - remote controls
  - smoke detectors
  - cellular phones

**Category B: Other Acceptable Electronics** – Be sure to check Category A for a complete listing of acceptable electronics.

- audio and stereo equipment:
  - cassette players, tape decks
  - compact disc (CD) players
  - MP3 music players
  - portable stereos, radios, receivers, speakers, turntables
- cameras:
  - digital
  - video
- bath, countertop, home maintenance, kitchen, laundry, personal care:
  - coffeemakers
  - curling irons
  - fans
  - hair dryers
  - hearing aids
  - irons
  - power cables/cords/surge protectors

- power tools
  - scales
  - toasters
  - toaster ovens
- computers, computer peripherals:
  - central processing unit (CPU)/personal computer (PC)
  - hard drives, compact disk (CD) drives, digital video disc (DVD) drivers, floppy drives, tape drives, zip drives
  - laptops, notebooks
  - modems
  - mice
  - scanners
- digital video disc (DVD) players,
- handhelds:
  - calculators
  - palm organizers
  - personal digital assistants (PDA)
  - pocket personal computers (PC)
  - portable email devices
- home office:
  - adding machines
  - facsimile (FAX) machines
  - photocopiers
  - typewriters
- telephones, telephone peripherals
  - answering machines
  - corded
  - cordless
  - desktop
  - pagers
- video game consoles
- wireless devices



United States  
Environmental Protection  
Agency

May 2004  
EPA530-K-04-004  
[www.epa.gov/osw](http://www.epa.gov/osw)

*Plug-In to eCycling*  
**Guidelines for Materials Management**



## **Purpose**

As part of an effort by EPA to develop national guidance for the management of “end-of-life” electronics, the Agency has drafted the following guidelines for use in the Plug-In To eCycling Campaign. The Campaign and its pilots will be used by the Agency to “test” these guidelines and allow the Agency to have real world information about what practices will most effectively protect human health and the environment, while at the same time enabling practicable programs for management of end-of-life electronics.

These guidelines are intended to be used as a framework for considering the acceptance of partners to the Plug-In Campaign. The Agency developed these guidelines based on what we believe, on a general basis, to be the most important elements for protection of human health and the environment in managing end-of-life electronics. However, the Agency is open to the possibility that not all aspects of these guidelines are critical in all cases of end-of-life management. That is, the Agency recognizes that, on a facility-specific basis, there may be practices that do not conform with every element of these guidelines, yet these practices may also ensure the protection of human health and the environment.

Vital to the success of the Campaign, as well as any program for improved management of end-of-life electronics, is the availability of adequate markets for reuse and recycling. Thus, these guidelines are not intended to be a barrier to delivering reusable equipment or industrial feedstock materials to legitimate markets and environmentally sound facilities, wherever they exist.

## **Applicability of Guidelines**

These guidelines are applicable to all Plug-In partners who, through contracts or other arrangements, utilize reuse, refurbishment, recycling or disposal services. Plug-In partners take appropriate due diligence measures to ensure that downstream facilities and operations use practices that are consistent with these guidelines. The guidelines are applicable to all activities undertaken by a Plug-In partner, not just those that are undertaken as part of a Plug-In To eCycling pilot.

The guidelines are not written to directly address collection activities. Rather, the guidelines address activities that ensue following collection: reuse, refurbishment, recycling and disposal, as well as the responsibilities of the Plug-In partner to ensure that such activities are conducted consistent with these guidelines.

Companies or other entities that perform recycling or related processing activities (other than collection) are not eligible to become Plug-In partners at this time. In order for the Agency to form Plug-In partnerships directly with processors and recyclers, the Agency would specifically request certain data and other information from these entities and/or request that such information be kept at the facility that would document the consistency of their operations with these guidelines. In order to minimize the burden on the public for information gathering pursuant to federal activities, the Paperwork Reduction Act of 1995 requires that the Agency obtain approval from the Office of Management and Budget (OMB) for such information gathering activities. Unfortunately, development of such an information gathering request by EPA, as well as the OMB approval process, would require 6 months to a year to complete. Thus, the Agency is not now in a position to request, receive and review information from processors and recyclers regarding the consistency of their operations with these guidelines. As an alternative, it is the intent of the Agency to work towards the establishment of a third-party organization to function as an entity for review and recognition of processors and recyclers of end-of-life electronics. The Agency also will not accept as Plug-In partners entities who are primarily engaged in the landfill or incineration of end-of-life electronics, as these disposal operations are not the primary focus of the Plug-In To eCycling program.

### **Due Diligence**

The guidelines call for due diligence efforts on the part of Plug-In partners regarding the handling and disposition of end-of-life electronics. However, the guidelines do not incorporate the same level of due diligence under all circumstances. Rather, the level of due diligence recommended is commensurate with the risk of the activities involved, as well as being aimed at fulfillment of certain waste and material management goals under Plug-In. For example, the guidelines call for due diligence to provide assurance that incineration and landfill of any form of e-waste is minimized and, if utilized, is safe; whereas, the due diligence steps for reuse, refurbishment and recycling focus on only those used electronics that contain or consist of materials that, if mismanaged, are most likely to present hazards to human health or the environment. Thus, reuse is the most favored management option, followed by recycling and, least desirable, landfilling or incineration.

Guidelines 1-4 below pertain to all end-of-life electronics for which Plug-In partners have responsibility. Among other things, guidelines 1-4 call for due diligence regarding any electronic products or components that are sent to incineration or land disposal. However, guideline 5, regarding reuse and refurbishment, and guideline 6, regarding recycling, only pertain to certain “designated materials,” as defined in the relevant footnote. Designated materials are those that are of concern because they contain or consist of materials that, when mismanaged, may present hazards to human health or the environment.

Thus, no guidelines beyond those of 1-4 apply to the reuse, refurbishment or recycling of end-of-life electronics that, either in processed or unprocessed form, do not contain or consist of designated materials. The Agency encourages the processing (including sorting) of used

electronics to enhance the value of output streams, often resulting in the generation of multiple commodity streams that do not contain or consist of designated materials.

Because equipment for reuse often contains designated materials, guideline 5 will be applicable to many reuse markets. However, to maximize reuse, the elements of guideline 5 are relatively simple--the Plug-In partner ensures that equipment meets legitimate reuse specifications, is packaged to protect its value, and that proper business records are kept of the transaction. The only other guideline having relevance to reuse is guideline 4(a)—the Plug-in partner ensures that export of reusable equipment is in conformance with the laws of importing and transit countries. Guidelines 1-5 are applicable to equipment for refurbishment.

## **GUIDELINES for MATERIALS MANAGEMENT**

### **All electronics**

1. The Plug-In partner<sup>1</sup> ensures that reuse, refurbishment and recycling techniques are used to the full extent practicable, i.e., recognizing technical and economic feasibility, in an effort to minimize incineration and land disposal of electronic equipment and components. The Plug-In partner ensures that proper business records are kept demonstrating that incineration and land disposal are minimized.

2. Where incineration or land disposal is unavoidable, the Plug-In partner ensures that:

a. Consideration is first given to whether the waste has value for energy recovery. For certain wastes, such as plastics, incineration with energy recovery is preferable over incineration without energy recovery or landfill. For wastes that have value for energy recovery, but for which energy recovery is technically or economically infeasible, the Plug-In partner ensures that a reasonable case of infeasibility has been made.

b. The wastes (including those generated at refurbishment and recycling operations, smelters, etc.) are managed safely at facilities that are fully licensed for treatment and disposal purposes by all appropriate governing authorities. The Plug-In partner ensures that there is written evidence substantiating this.

c. Landfills and incinerators have an environmental management system in place, as is described in guideline 6(b) below for certain recycling facilities.

3. The Plug-In partner ensures that all applicable federal and state requirements pertaining to the transport, processing and management of electronic products and components are complied with.

4. In the case of export of any electronic products and components, the Plug-In partner ensures that:

a. Any applicable requirements of the U.S., as well as applicable requirements of

importing and transit countries, are complied with, and proper business records are kept documenting such compliance.

b. Prior to export, the materials listed below are removed and handled separately, unless:

- i. The export is for purposes of reuse or refurbishment, or
- ii. The Plug-In partner has documented and regularly monitored controls in place to assure that the materials will be removed in member countries of the OECD:

(1) Batteries.

(2) Mercury- and PCB-containing lamps and devices.

(3) Circuit boards, unless they are contained in hand-held electronic equipment, such as cellular phones, PDAs, etc. (Note: Under U.S. rules, minimal quantities of mercury and batteries that are protectively packaged to minimize dispersion of metal constituents do not need to be removed from whole circuit boards).

(4) CRTs and CRT glass, both of which are adequately processed for use as an industrial feedstock material prior to export.

*Note: The U.S. is not currently a party to the Basel Convention, although the U.S. is a member of the OECD. International trade in hazardous wastes is governed by existing agreements under both OECD and Basel, as well as by the laws of exporting, importing and transit countries. Trade in end-of-life electronics that are considered hazardous wastes intended for recovery between the U.S. and any OECD country are governed by the OECD control system, as implemented through the laws and regulations of the member countries. Because the U.S. is not a party to the Basel Convention, federal law does not yet include obligations for U.S. exporters of end-of-life electronics that are considered hazardous wastes under the Basel Convention. However, U.S. exporters should be cognizant that Basel Convention requirements could affect them, as implemented by the laws of importing and transit countries. In addition, the importing and transit countries may have other laws and regulations that could affect U.S. exporters and their transactions. Until such time as the U.S. becomes a party to the Basel Convention, no country that is a party to Basel but not a member of OECD can legally accept hazardous waste exported from the U.S. absent a bilateral agreement between the governments under Article 11 of the Basel Convention. At this time, the U.S. has no bilateral agreements with any countries outside of the OECD that provide for the export of hazardous waste. Current U.S. rules regarding the export of hazardous wastes can be found at 40 CFR Part 262, Subparts E and H.*

#### **“Designated materials” for reuse or refurbishment**

5. This guideline applies to designated materials<sup>2</sup> that are directed to reuse or refurbishment.<sup>3</sup> However, it is only intended to apply to those shipments of designated materials (such as the following intact equipment: monitors, televisions, CRT bulbs, CPUs, laptops, printers and cell phones) that have been prescreened to meet legitimate reuse or refurbishment specifications. Unscreened shipments for evaluation of reuse/refurbishment potential and shipments containing some reusable (or refurbishable) and some non-reusable (or non-refurbishable) equipment are

considered shipments for recycling and are addressed in guideline 6. In the case of refurbishment, guidelines 1-4 and 6 apply to any components that are subsequently determined to be unusable.

For designated materials that are directed to reuse or refurbishment, the Plug-In partner ensures that:

- a. All items in the shipment meet legitimate reuse or refurbishment specifications.
- b. All items in the shipment meet the specifications of the consignee.
- c. All items in the shipment are packaged in a manner that is consistent with preservation of the used equipment for reuse or refurbishment. That is, the packaging protects the used equipment in storage and transport, such that the value of the used equipment for reuse or refurbishment is not diminished.
- d. Proper business records are kept that document the transfer of the used equipment to the consignee for reuse or refurbishment purposes, including:
  - i. Name and address of consignee.
  - ii. Description of shipment content and conformance with consignee product specifications.
  - iii. Product specifications of consignee.
  - iv. If for-profit transaction, amount paid for the consigned material.

#### **“Designated materials” for recycling**

6. The Plug-In partner ensures that all designated materials that are directed to recycling<sup>4</sup> are processed by facilities that meet the guidelines herein. The Plug-In partner ensures that proper business records are kept that demonstrate that all downstream processing and recycling operations, including smelters, that receive designated materials, use practices that are consistent with these guidelines. For any processing and recycling facilities that receive designated materials, the Plug-In partner ensures that:

- a. Facilities are fully licensed by all appropriate governing authorities. The degree of licensing necessary will vary depending upon the particular jurisdiction, as well as the size and nature of the facility. In some cases, extensive environmental permitting may be required by the governmental authorities, whereas in other cases perhaps only a business license is needed.
- b. Facilities have an environmental management system (EMS) in place. EPA recognizes that flexibility for small businesses is necessary and that, in some cases, a fully developed and certified EMS may be unnecessary. In lieu of a fully developed and certified EMS (e.g., using ISO, EMAS or industry standards, such as those of the IAER), a facility has a written plan describing the facility’s risk management objectives for environmental performance and compliance and its plans for attaining these objectives based on a “plan-do-check-act” continual

improvement model. Regular re-evaluation of environment, health and safety (EH&S) objectives and monitoring of progress toward achievement of these objectives is conducted and documented at all facilities. EPA also recognizes that a fully developed EMS may not yet be in place for many facilities. In any case, a written plan describing risk management objectives and plans for attainment based on a “plan-do-check-act” model is in place.

c. Facilities take sufficient measures to safeguard occupational and environmental health and safety. Such measures may be indicated by local, state, national and international regulations, agreements, principles and standards, as well as by industry standards and guidelines. Except as noted below, such measures for all facilities include:

- i. EH&S training of personnel.
- ii. An up-to-date, written hazardous materials identification and management plan that specifically addresses at least the following: lead, mercury, beryllium, cadmium, batteries, toner, phosphor compounds, PCBs, and brominated flame retardants and other halogenated materials, with particular focus on possible generation of by-product dioxins and furans.
- iii. Where materials are shredded or heated, appropriate measures to protect workers, the general public and the environment from hazardous dusts and emissions. Such measures include adaptations in equipment design or operational practices, air flow controls, personal protective devices for workers, pollution control equipment or a combination of these measures.
- iv. An up-to-date, written plan for reporting and responding to exceptional pollutant releases, including emergencies such as accidents, spills, fires, and explosions.
- v. Liability insurance for pollutant releases, accidents and other emergencies.
- vi. Completion of an EH&S audit, preferably by a recognized independent auditor, on an annual basis. However, for small businesses, greater flexibility may be needed, and an audit every three years may be appropriate.

d. Facilities have a regularly-implemented and documented monitoring and recordkeeping program that tracks key process parameters, compliance with relevant safety procedures, effluents and emissions, and incoming, stored and outgoing materials and wastes.

e. Facilities have an adequate plan for closure. The need for closure plans and financial guarantees is determined by applicable laws and regulations, taking into consideration the level of risk. Closure plans should be updated periodically, and financial guarantees should ensure that the necessary measures are undertaken upon definite cessation of activities to prevent any environmental damage and return the site of operation to a satisfactory state, as required by the applicable laws and regulations.

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<sup>1</sup> “Plug-In partner” means a manufacturer, retailer, government agency, non-profit, or other entity who (1) is not a recycler nor performs recycling activities (other than collection), (2) through contracts or other arrangements, utilizes reuse, refurbishment, recycling or disposal services, and (3) has a Plug-In To eCycling partnership agreement with EPA.

<sup>2</sup> “Designated materials” means any electronic products and components containing or consisting of circuit boards, shredded circuit boards, CRTs, batteries, and mercury- and PCB-containing lamps and devices. However, this definition does not include circuit boards that have been processed to the point where they no longer are readily identifiable as circuit boards or shredded circuit boards (such as after burning/melting), as well as CRT glass that has been adequately processed for use as an industrial feedstock material. In these cases, the economic value of the material has been enhanced significantly through processing; thus, commodities of value have been created and concern for the subsequent environmental mismanagement of this material is greatly decreased.

<sup>3</sup> “Refurbishment” means the repair, reconditioning or upgrading of an end-of-life product or component for the purpose of equipment reuse. Refurbishment of end-of-life electronics includes replacement of components or parts that are part of a larger piece of electronic equipment, aesthetic improvements, such as polishing and removal of scratches, and upgrading of the equipment by installation of new operating systems, memory, or software.

<sup>4</sup> “Recycling” facilities include any non-disposal facilities that receive designated materials under conditions that do not conform with guideline 5 above for legitimate reuse or refurbishment.